

Application No.: 10/500,014  
Amendment Dated: October 18, 2010  
Reply to Office Action of: July 20, 2010

MAT-8566US

**Remarks/Arguments:**

Claims 1 and 3-30 are pending and rejected in the application. Claims 5, 6, 9-14 and 22-23 have been cancelled. Claims 1, 15, 16, 19 and 28 have been amended. No new matter has been added.

On page 2, the Official Action objects to claims 3-6 because they are identical. Thus, Applicants have cancelled claims 5 and 6. Withdrawal of the objection is respectfully requested.

On page 3, the Official Action rejects claim 15 under 35 U.S.C. § 112, first paragraph, because the Examiner believes that it is a single means claim. Thus, Applicants have amended claim 15 to include a "home agent information acquiring section" which obtains information about the new home agent (see element 1306 of Fig. 10 in Applicants' specification for support). Withdrawal of the rejection is respectfully requested.

On page 4, the Official Action rejects claims 1, 3-8, 15-21 and 24-27 under 35 U.S.C. § 103(a) as being unpatentable over Gwon (US 2003/0016655) in view of Sebastian (US 6,973,313), in view of Warriar et al. (US 6,707,809) and further in view of Leung (US 6,195,705). It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

**... measuring a first value of ... a communication delay time between the mobile node and a belonging home agent ...**

**... acquiring information about a new home agent when the first value is equal to or greater than a first predetermined value , the acquired information about the new home agent including a second value of ... a communication delay time between the mobile node and the new home agent ...**

**... changing from the belonging home agent to the new home agent when the second value is less than the first value ... (Emphasis Added)**

Claim 1 relates to a mobile node which changes from a belonging home agent to a new home agent based on communication delay. Specifically, the mobile node acquires a communication delay between the mobile node and a new home agent when the communication delay between the mobile node and the belonging home agent is greater than a predetermined value (i.e. mobile node looks for a new home agent when the belonging home agent delay is too large). This feature is at least supported on page 21, line 23, to page 22, line 12 of Applicants' specification, and furthermore shown in Figs. 1 and 2. No new matter has been added.

Gwon's Fig.2 shows a network where a mobile node is handed off between foreign agents. For example, as mobile node 135 moves from position A to position C in the network, mobile node changes from foreign agent R1 to foreign agent R2.

In similar art, Fig. 2 of Warriar suggests a system having a plurality of home agents (18, 18A and 18B). Thus, if mobile node 10 is registered to network 14, then messages sent to network 14 are forwarded from home agent 18 to the care of address of mobile node 10.

In similar art, Fig. 2A of Leung suggests that mobile node 27 may be able to switch home agents. For example, if home agent 2 fails, then mobile node 27 will move to a new home agent (e.g. home agent 3). Thus, Leung's system only switches based on failure of a home agent (not based on communication delay).

Sebastian suggests a system that determines an optimal gateway for servicing a mobile client (e.g. the gateway with the smallest communication delay). For example, as shown in Fig. 1, Sebastian's client 102 moves from position 102A in the network to position 102B. Upon switching to foreign agent 132, Sebastian's system determines the optimum gateway in order to communicate between the foreign agent and the home agent 112. For example, Sebastian's system may determine that gateway 114 has a smaller number of communication hops than gateways 120 and 122. Thus, gateway 114 is selected as the optimum gateway because its number of hops are the lowest. This feature is at least supported in col. 4, lines 30-50 of Sebastian. Thus, Sebastian's client 102 obtains the hop information from the gateways in response to switching to a different foreign agent (the hop information

about the other gateways is not obtained when the hop number of the current gateway exceeds a predetermined threshold).

Applicants' representative would like to thank the Examiner for the interview conducted on August 4, 2010. During the telephone interview, Applicants' representative explained that Sebastian's system determined an optimal gateway having a smallest hop delay for servicing a mobile client. Specifically, Sebastian's systems acquires the hop delay of the gateways in response to switching to a new foreign agent (i.e., when the mobile client moves to a new foreign agent, it automatically acquires the hop delay from all of the gateways within the network).

In contrast, Applicants' representatives explained that Applicants' invention (as currently recited by claim 1) acquires the communication delay information from a new home agent in response to the communication delay of the current home agent exceeding a predetermined value. In response to Applicants' representative's arguments, the Examiner stated that he now understands our position and will have to further consider our argument when they are filed.

Neither Gwon, Warriar, Leung, Sebastian or their combination discloses or suggests a mobile node which acquires information about a new home agent when the number of hops to the belonging home agent is above a predetermined value.

Applicants' claim 1 is different than the art of record, because the mobile node switches from a belonging home agent to a new home agent when the delay to the new home agent is less than the delay to the belonging home agent ("*... measuring a first value of ...a communication delay time between the mobile node and a belonging home agent ... acquiring information about a new home agent when the first value is equal to or greater than a first predetermined value, the acquired information about the new home agent including a second value of ... a communication delay time between the mobile node and the new home agent ... changing from the belonging home agent to the new home agent when the second value is less than the first value... "*).

As shown in Applicants' Fig. 1, mobile node 10 moves from position 13 to position 16 in the network. Mobile node 10 then measures the communication delay

between mobile node 10 and home agent 11 (the belonging home agent). If the communication delay between the mobile node and the belonging home agent 11 exceeds the predetermined value, then the mobile node acquires communication delay information about new home agents. For example, if the communication delay between mobile node 10 and belonging home agent 11 is above a predetermined value, then mobile node 10 may acquire the communication delay between mobile node 10 and a new home agent 14. Mobile node 10 then compares the communication delay to the belonging home agent 11 and the new home agent 14. Mobile node 10 then chooses the home agent which has the smallest communication delay. This feature is at least described on page 21, line 23 to page 22, line 12 of Applicants' specification. Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record.

Independent claims 15, 16 and 19 include similar features to claim 1. Thus, independent claims 15, 16 and 19 are also patentable over the art of record for at least the reasons set forth above.

Dependent claims 3, 4, 7, 8, 17, 18, 20, 21 and 24-27 include all of the features of the claims from which they depend. Thus, these claims are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

The rejection of dependent claims 5 and 6 are moot in view of their cancellation.

On page 22, the Official Action rejects claims 9-14, 22-23 and 28-30 under 35 U.S.C. § 103(a) as being unpatentable over Gwon in view of Warriar and Leung. As already discussed, Gwon, Warriar and Leung do not suggest the features in independent claim 1. Thus, independent claim 28 which includes similar features to independent claim 1 is also patentable over the art of record for at least the reasons set forth above.

Dependent claims 29 and 30 include all of the features of claim 28 from which they depend. Thus, these claims are also patentable over the art of record for at least the reasons set forth above.


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The rejections of claims 9-14 and 22-23 are moot in view of their cancellation.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,



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Jacques L. Etkowicz, Reg. No. 41,738  
Attorney for Applicants

RAE/fp

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P.O. Box 980  
Valley Forge, PA 19482  
(610) 407-0700

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